

RE: 251848
Lot 46 Harnett Lakes

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: A & G Residential, LLC Project Name: 251848
Lot/Block: Model: Havilland CD Roof
Address: Subdivision:
City: State: NC

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):

Design Code: IRC2015/TPI2014	Design Program: MiTek 20/20 25.3
Wind Code: ASCE 7-10	Wind Speed: 130 mph
Roof Load: 40.0 psf	Floor Load: N/A psf

This package includes 14 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date
1	I76937391	A1	10/9/2025
2	I76937392	A2	10/9/2025
3	I76937393	A3	10/9/2025
4	I76937394	A4	10/9/2025
5	I76937395	A6	10/9/2025
6	I76937396	B1	10/9/2025
7	I76937397	B2	10/9/2025
8	I76937398	J1	10/9/2025
9	I76937399	J2	10/9/2025
10	I76937400	J06	10/9/2025
11	I76937401	J07	10/9/2025
12	I76937402	V1	10/9/2025
13	I76937403	V2	10/9/2025
14	I76937404	V3	10/9/2025

The truss drawing(s) referenced above have been prepared by
Truss Engineering Co. under my direct supervision
based on the parameters provided by Comtech, Inc - Fayetteville.

Truss Design Engineer's Name: Gilbert, Eric

My license renewal date for the state of North Carolina is December 31, 2025.

North Carolina COA: C-0844

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to TRENCO. Any project specific information included is for TRENCO customers file reference purpose only, and was not taken into account in the preparation of these designs. TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

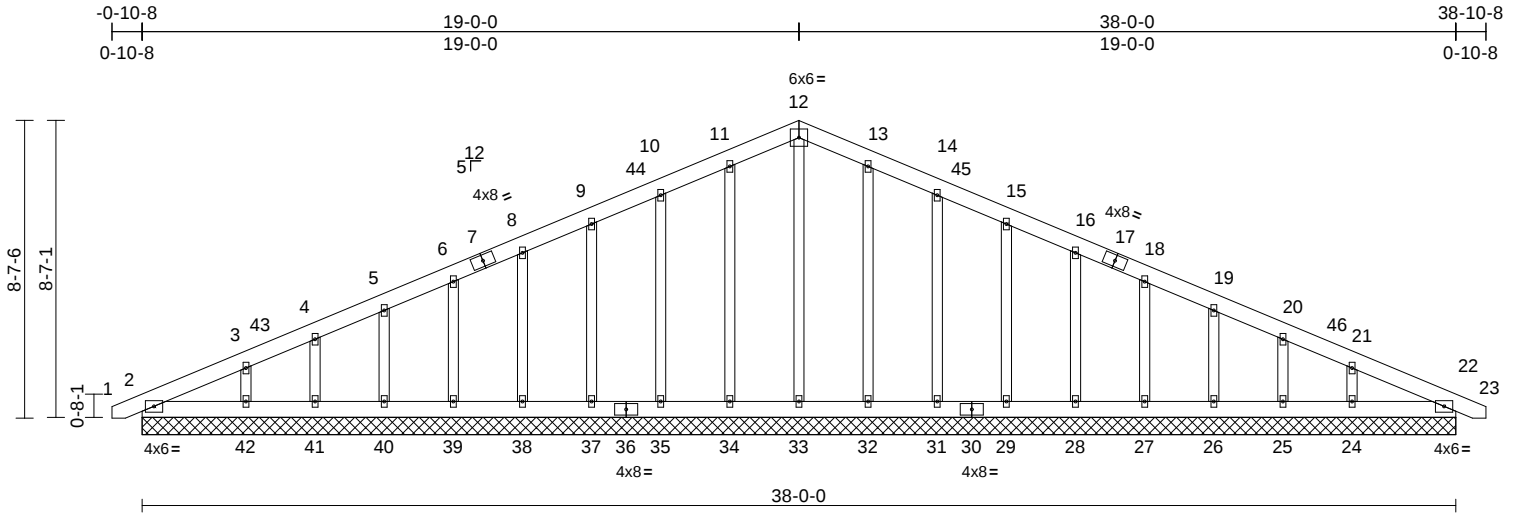


Job	Truss	Truss Type	Qty	Ply	Lot 46 Harnett Lakes	
251848	A1	GABLE	1	1	Job Reference (optional)	I76937391

Comtech, Inc, Fayetteville, NC - 28314,

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Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	n/a	-	n/a	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.03	n/a	-	n/a	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.14	Horz(CT)	0.01	22	n/a		
BCDL	10.0	Code	IRC2015/TPI2014	Matrix-S							
Weight: 295 lb FT = 20%											

LUMBER

TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
OTHERS 2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 2=38-0-0, 22=38-0-0, 24=38-0-0, 25=38-0-0, 26=38-0-0, 27=38-0-0, 28=38-0-0, 29=38-0-0, 31=38-0-0, 32=38-0-0, 33=38-0-0, 34=38-0-0, 35=38-0-0, 37=38-0-0, 38=38-0-0, 39=38-0-0, 40=38-0-0, 41=38-0-0, 42=38-0-0
Max Horiz 2=166 (LC 12)
Max Uplift 2=-27 (LC 13), 22=-8 (LC 9), 24=-100 (LC 13), 25=-53 (LC 13), 26=-63 (LC 13), 27=-62 (LC 13), 28=-62 (LC 13), 29=-62 (LC 13), 31=-70 (LC 13), 32=-40 (LC 13), 34=-47 (LC 12), 35=-68 (LC 12), 37=-62 (LC 12), 38=-62 (LC 12), 39=-62 (LC 12), 40=-63 (LC 12), 41=-53 (LC 12), 42=-104 (LC 12)
Max Grav 2=152 (LC 1), 22=152 (LC 1), 24=236 (LC 24), 25=135 (LC 24), 26=165 (LC 1), 27=159 (LC 24), 28=160 (LC 1), 29=160 (LC 1), 31=162 (LC 24), 32=163 (LC 24), 33=171 (LC 22), 34=163 (LC 23), 35=162 (LC 23), 37=160 (LC 1), 38=160 (LC 1), 39=159 (LC 23), 40=165 (LC 1), 41=135 (LC 23), 42=236 (LC 23)

FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD

1-2=0/5, 2-3=-204/83, 3-4=-134/91, 4-5=-103/104, 5-6=-77/129, 6-8=-55/153, 8-9=-66/196, 9-10=-82/243, 10-11=-99/292, 11-12=-112/328, 12-13=-112/329, 13-14=-99/293, 14-15=-82/243, 15-16=-66/197, 16-18=-49/150, 18-19=-39/104, 19-20=-46/56, 20-21=-70/19, 21-22=-130/47, 22-23=0/5

BOT CHORD

2-42=-41/152, 41-42=-41/152, 40-41=-41/152, 39-40=-41/152, 38-39=-41/152, 37-38=-41/152, 35-37=-41/152, 34-35=-41/152, 33-34=-41/152, 32-33=-41/152, 31-32=-41/152, 29-31=-41/152, 28-29=-41/152, 27-28=-41/152, 26-27=-41/152, 25-26=-41/152, 24-25=-41/152, 22-24=-41/152, 12-33=-131/0, 11-34=-123/141, 10-35=-122/156, 9-37=-120/98, 8-38=-120/97, 6-39=-120/97, 5-40=-122/100, 4-41=-105/86, 3-42=-168/226, 13-32=-123/141, 14-31=-122/156, 15-29=-120/98, 16-28=-120/97, 18-27=-120/97, 19-26=-122/100, 20-25=-105/86, 21-24=-168/226

WEBS

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-10; Vult=130mph (3-second gust) Vasd=103mph; TC DL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner (3) -0-8-2 to 3-8-10, Exterior (2) 3-8-10 to 19-0-0, Corner (3) 19-0-0 to 23-4-13, Exterior (2) 23-4-13 to 38-8-2 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.

- All plates are 2x4 (||) MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 2, 8 lb uplift at joint 22, 47 lb uplift at joint 34, 68 lb uplift at joint 35, 62 lb uplift at joint 37, 62 lb uplift at joint 38, 62 lb uplift at joint 39, 63 lb uplift at joint 40, 53 lb uplift at joint 41, 104 lb uplift at joint 42, 40 lb uplift at joint 32, 70 lb uplift at joint 31, 62 lb uplift at joint 29, 62 lb uplift at joint 28, 62 lb uplift at joint 27, 63 lb uplift at joint 26, 53 lb uplift at joint 25 and 100 lb uplift at joint 24.

LOAD CASE(S) Standard



October 9, 2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbcacompnents.com)

ENGINEERING BY
TRENCO
A MiTek Affiliate

818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 46 Harnett Lakes
251848	A2	DUAL RIDGE GABLE	1	1	Job Reference (optional)

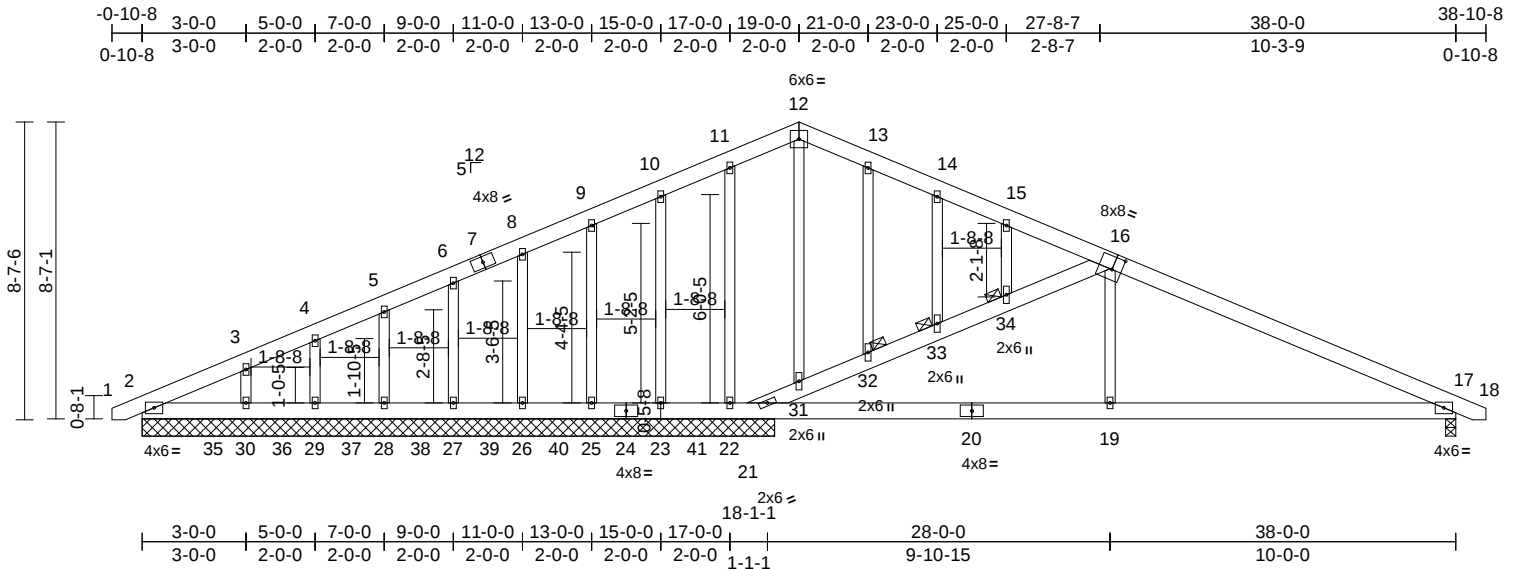
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Comtech, Inc, Fayetteville, NC - 28314,

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Scale = 1:66.7

Plate Offsets (X, Y): [16:0-3-4,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.49	Vert(LL)	-0.06	17-19	>999	360	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.38	Vert(CT)	-0.14	17-19	>999	240	
BCLL	0.0*	Rep Stress Incr	NO	WB	0.34	Horz(CT)	-0.02	2	n/a	n/a	
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.06	17-19	>999	240	Weight: 296 lb FT = 20%

LUMBER

TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2 *Except* 21-16:2x6 SP No.1

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing, Except:
10-0-0 oc bracing: 19-21,17-19.

JOINTS 1 Brace at Jt(s): 32, 33, 34

REACTIONS (size) 2=18-3-8, 17=0-3-8, 21=18-3-8, 22=18-3-8, 23=18-3-8, 25=18-3-8, 26=18-3-8, 27=18-3-8, 28=18-3-8, 29=18-3-8, 30=18-3-8

Max Horiz 17=166 (LC 13)
Max Uplift 2=-21 (LC 9), 17=-258 (LC 9), 22=-403 (LC 3), 23=-100 (LC 8), 25=-108 (LC 8), 26=-103 (LC 8), 27=-104 (LC 8), 28=-107 (LC 8), 29=-90 (LC 8), 30=-158 (LC 8)
Max Grav 2=236 (LC 1), 17=888 (LC 1), 21=1264 (LC 3), 22=178 (LC 1), 23=316 (LC 21), 25=367 (LC 1), 26=368 (LC 1), 27=359 (LC 21), 28=375 (LC 1), 29=308 (LC 21), 30=518 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 12-13=-115/211, 13-14=-148/194, 14-15=-149/171, 15-17=-1391/387, 17-18=0/5, 1-2=0/5, 2-3=-213/57, 3-4=-178/56, 4-5=-152/76, 5-6=-152/100, 6-8=-151/124, 8-9=-153/149, 9-10=-155/173, 10-11=-93/178, 11-12=-198/228

BOT CHORD 2-30=-36/193, 29-30=-36/193, 28-29=-36/193, 27-28=-36/193, 26-27=-36/193, 25-26=-36/193, 23-25=-36/193, 22-23=-36/193, 21-22=-36/193, 19-21=-401/1180, 17-19=-401/1180
21-31=-1166/435, 31-32=-1169/463, 32-33=-1159/451, 33-34=-1114/420, 16-34=-1147/441, 12-31=-73/19, 11-22=-382/109, 13-32=-27/30, 10-23=-55/103, 9-25=-124/86, 8-26=-124/86, 6-27=-119/86, 5-28=-123/88, 4-29=-102/78, 3-30=-176/130, 14-33=-117/80, 15-34=-55/86, 16-19=0/443

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- All plates are 2x4 (II) MT20 unless otherwise indicated.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 21 lb uplift at joint 2, 403 lb uplift at joint 22, 100 lb uplift at joint 23, 108 lb uplift at joint 25, 103 lb uplift at joint 26, 104 lb uplift at joint 27, 107 lb uplift at joint 28, 90 lb uplift at joint 29, 158 lb uplift at joint 30 and 258 lb uplift at joint 17.

9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 200 lb down and 39 lb up at 2-0-12, 202 lb down and 42 lb up at 4-0-12, 202 lb down and 42 lb up at 6-0-12, 202 lb down and 42 lb up at 8-0-12, 202 lb down and 42 lb up at 10-0-12, 202 lb down and 42 lb up at 12-0-12, and 202 lb down and 42 lb up at 14-0-12, and 202 lb down and 42 lb up at 16-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

- Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 12-18=-60, 1-12=-60, 2-17=-20
Concentrated Loads (lb)
Vert: 24=-202, 35=-200, 36=-202, 37=-202, 38=-202, 39=-202, 40=-202, 41=-202



October 9,2025

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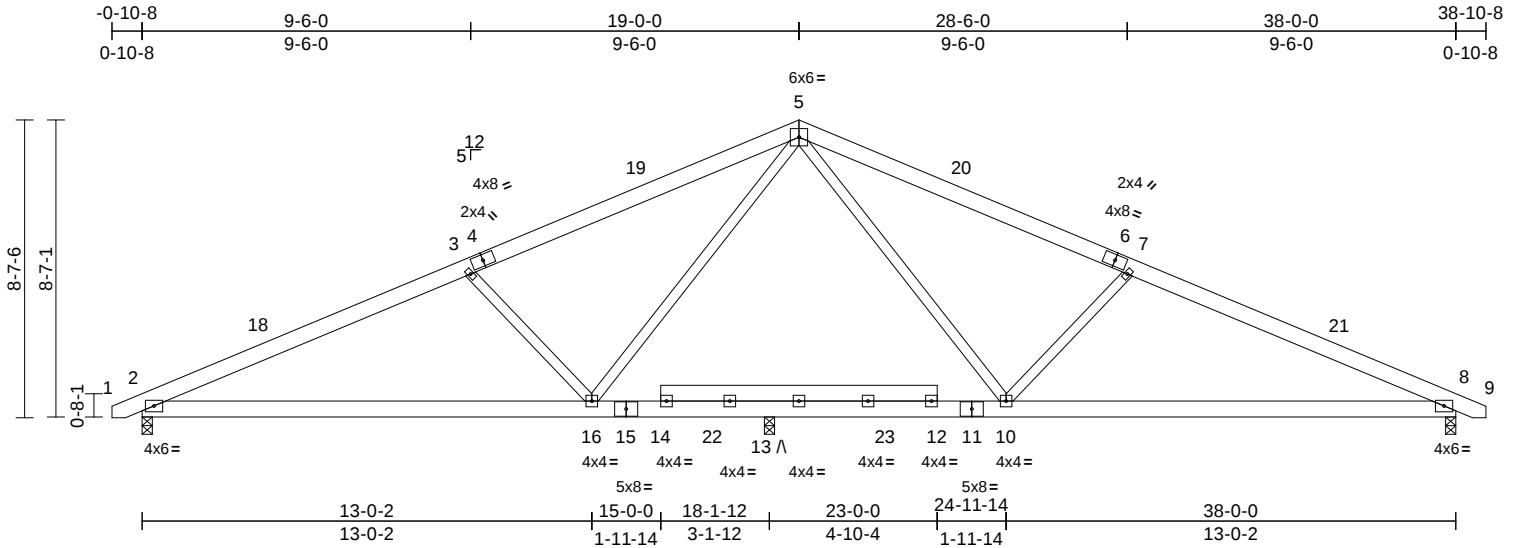
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 46 Harnett Lakes	
251848	A3	COMMON	7	1	Job Reference (optional)	I76937393

Comtech, Inc, Fayetteville, NC - 28314,

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Scale = 1:66.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.42	Vert(LL)	-0.25	2-16	>877	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.74	Vert(CT)	-0.51	2-16	>420	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.31	Horz(CT)	0.05	8	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.10	2-16	>999	240	Weight: 253 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2 *Except* 14-12:2x6 SP No.1

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-5-1 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 2=0-3-8, 8=0-3-8, 13=0-3-8
Max Horiz 2=98 (LC 12)
Max Uplift 2=-81 (LC 12), 8=-81 (LC 13),
13=REL
Max Grav 2=1361 (LC 2), 8=1401 (LC 2),
13=876 (LC 2)

FORCES

(lb) - Maximum Compression/Maximum Tension

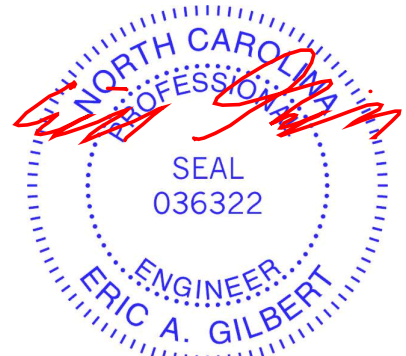
TOP CHORD 1-2=0/5, 2-3=-2366/471, 3-5=-2038/416,
5-7=-2145/406, 7-8=-2472/461, 8-9=0/5
BOT CHORD 2-16=-346/2119, 13-16=-111/1455,
10-13=-109/1444, 8-10=-329/2215
WEBS 5-10=-21/844, 7-10=-610/332, 5-16=-37/694,
3-16=-613/331

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-8-2 to 3-8-10, Interior (1) 3-8-10 to 19-0-0, Exterior(2R) 19-0-0 to 23-4-13, Interior (1) 23-4-13 to 38-8-2 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 200.0lb AC unit load placed on the bottom chord, 19-0-0 from left end, supported at two points, 5-0-0 apart.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 81 lb uplift at joint 2 and 81 lb uplift at joint 8.
- "A" indicates Released bearing: allow for upward movement at joint(s) 13.

LOAD CASE(S) Standard



October 9, 2025

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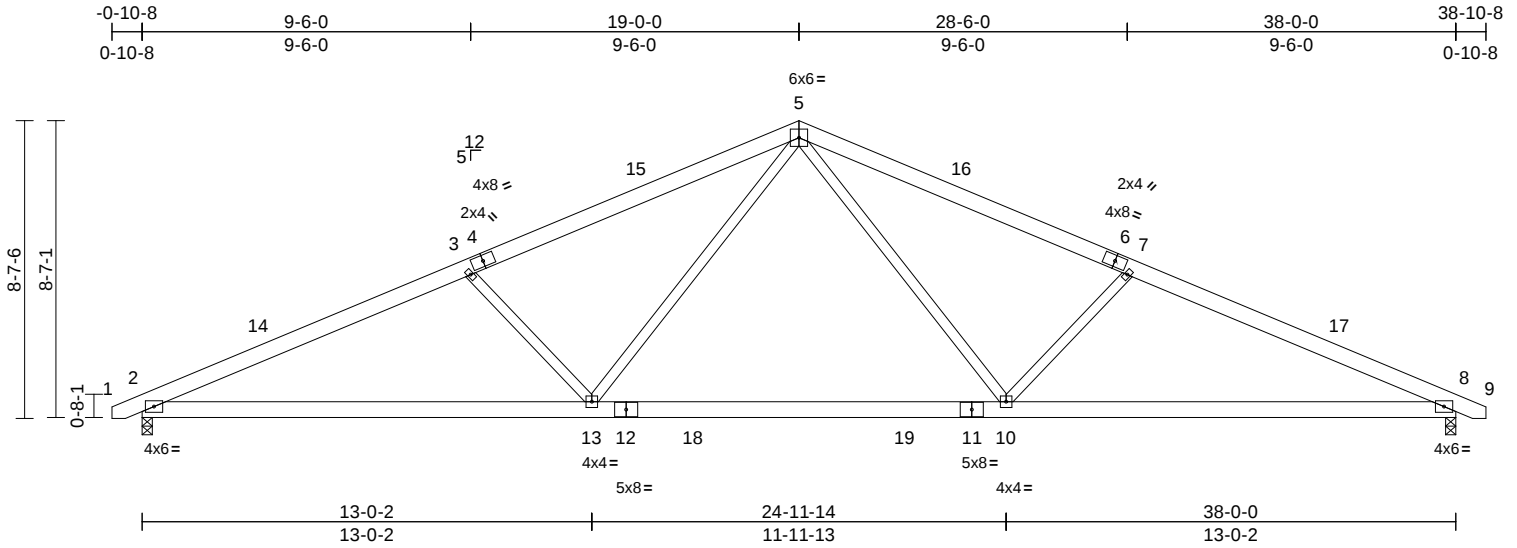
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 46 Harnett Lakes	176937394
251848	A4	COMMON	11	1	Job Reference (optional)	

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Oct 2 2025 Print: 25.3.0 S Oct 2 2025 MiTek Industries, Inc. Wed Oct 08 15:58:12
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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.41	Vert(LL)	-0.32	10-13	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.81	Vert(CT)	-0.46	10-13	>994	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.09	8	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.08	2-13	>999	240	Weight: 234 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2

5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 107 lb uplift at joint 2 and 107 lb uplift at joint 8.
LOAD CASE(S) Standard

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-9-9 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 8=0-3-8
Max Horiz 2=98 (LC 16)
Max Uplift 2=-107 (LC 12), 8=-107 (LC 13)
Max Grav 2=1736 (LC 2), 8=1736 (LC 2)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/5, 2-3=-3348/638, 3-5=-3034/585, 5-7=-3034/585, 7-8=-3348/638, 8-9=0/5
BOT CHORD 2-13=-500/3011, 10-13=-218/2033, 8-10=-489/3011
WEBS 5-10=-110/1151, 7-10=-592/325, 5-13=-110/1151, 3-13=-592/325

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-8-2 to 3-8-10, Interior (1) 3-8-10 to 19-0-0, Exterior(2R) 19-0-0 to 23-4-13, Interior (1) 23-4-13 to 38-8-2 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.



October 9, 2025

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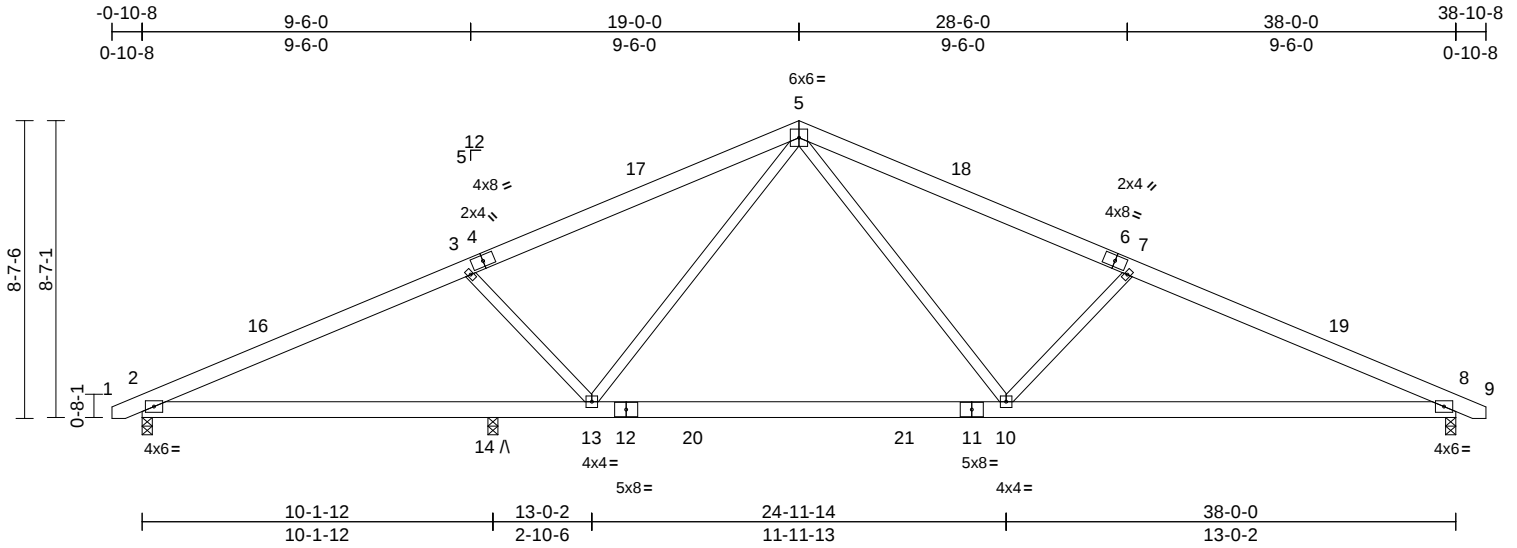
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 46 Harnett Lakes	
251848	A6	COMMON	3	1	Job Reference (optional)	I76937395

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Oct 2 2025 Print: 25.3.0 S Oct 2 2025 MiTek Industries, Inc. Wed Oct 08 15:58:12
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Page: 1



Scale = 1:66.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.41	Vert(LL)	-0.38	10-13	>882	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.85	Vert(CT)	-0.58	10-13	>575	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.08	8	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.11	10-13	>999	240	Weight: 234 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 135 lb uplift at joint 2 and 122 lb uplift at joint 8.
- "A" indicates Released bearing: allow for upward movement at joint(s) 14.

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-0-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

LOAD CASE(S) Standard

REACTIONS

(size) 2=0-3-8, 8=0-3-8, 14=0-3-8
Max Horiz 2=98 (LC 12)
Max Uplift 2=-135 (LC 12), 8=-122 (LC 13), 14=REL
Max Grav 2=1374 (LC 2), 8=1605 (LC 2), 14=492 (LC 2)

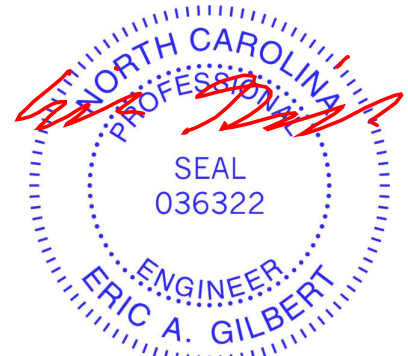
FORCES

(lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/5, 2-3=-2643/638, 3-5=-2313/586, 5-7=-2733/585, 7-8=-3049/638, 8-9=0/5
BOT CHORD 2-14=-500/2342, 13-14=-500/2342, 10-13=-218/1708, 8-10=-489/2737
WEBS 5-10=-109/1217, 7-10=-595/325, 5-13=-110/632, 3-13=-586/323

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-8-2 to 3-8-10, Interior (1) 3-8-10 to 19-0-0, Exterior(2R) 19-0-0 to 23-4-13, Interior (1) 23-4-13 to 38-8-2 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.



October 9, 2025

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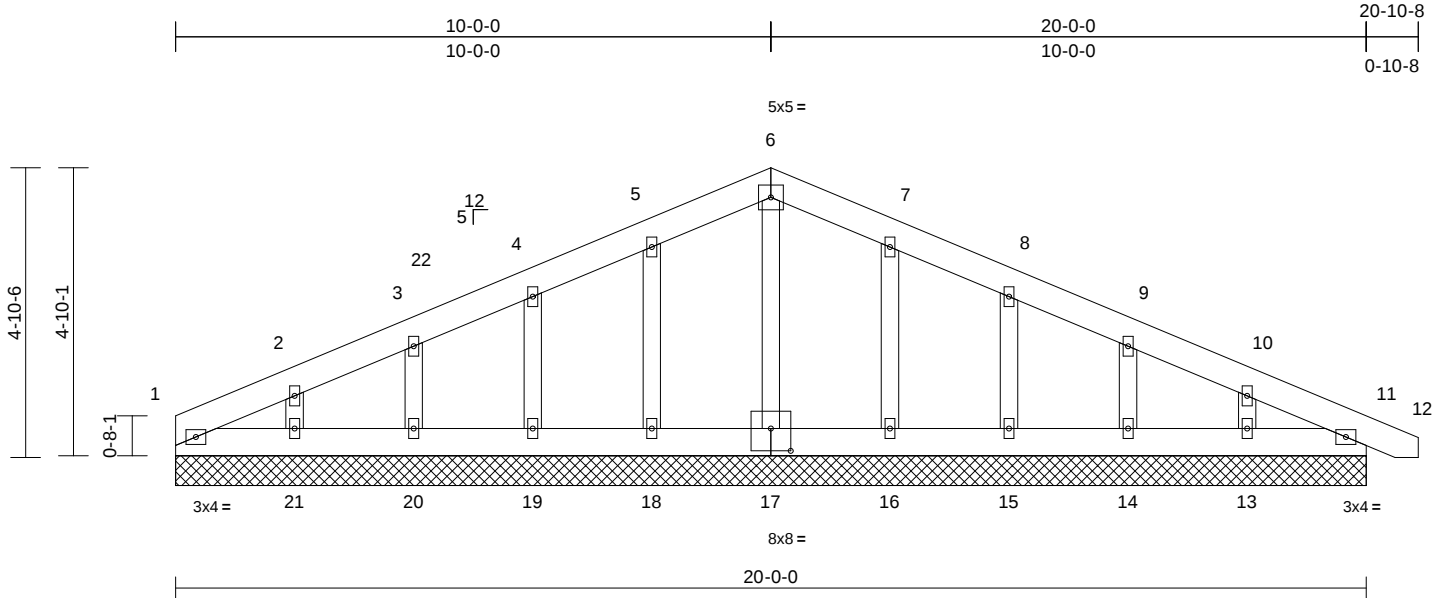
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 46 Harnett Lakes
251848	B1	GABLE	1	1	176937396
Job Reference (optional)					

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Oct 2 2025 Print: 25.3.0 S Oct 2 2025 MiTek Industries, Inc. Wed Oct 08 15:58:12
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Page: 1



Scale = 1:38.7

Plate Offsets (X, Y): [17:0-4-0,0-4-8]

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.02	Vert(LL)	n/a	-	999	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.01	Vert(CT)	n/a	-	999		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	11	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S							
Weight: 128 lb FT = 20%											

LUMBER

TOP CHORD	2x6 SP No.1
BOT CHORD	2x6 SP No.1
OTHERS	2x4 SP No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS	(size)	1=20-0-0, 11=20-0-0, 13=20-0-0, 14=20-0-0, 15=20-0-0, 16=20-0-0, 17=20-0-0, 18=20-0-0, 19=20-0-0, 20=20-0-0, 21=20-0-0
	Max Horiz	1=-92 (LC 13)
	Max Uplift	1=-15 (LC 13), 11=-23 (LC 9), 13=-72 (LC 13), 14=-60 (LC 13), 15=-66 (LC 13), 16=-57 (LC 13), 18=-60 (LC 12), 19=-65 (LC 12), 20=-59 (LC 12), 21=-81 (LC 12)
	Max Grav	1=71 (LC 1), 11=120 (LC 1), 13=169 (LC 26), 14=158 (LC 1), 15=161 (LC 26), 16=166 (LC 26), 17=138 (LC 1), 18=166 (LC 25), 19=161 (LC 25), 20=155 (LC 1), 21=180 (LC 25)

FORCES

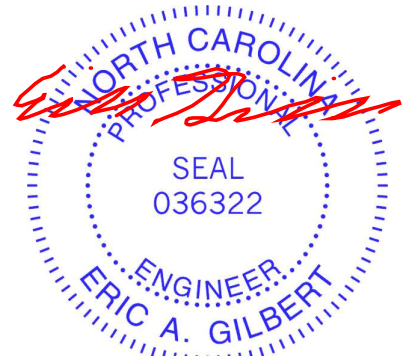
(lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-104/50, 2-3=-67/62, 3-4=-44/85, 4-5=-50/133, 5-6=-66/178, 6-7=-66/178, 7-8=-50/133, 8-9=-39/83, 9-10=-40/26, 10-11=-67/21, 11-12=0/5
BOT CHORD	1-21=-18/96, 20-21=-18/96, 19-20=-18/96, 18-19=-18/96, 16-18=-18/96, 15-16=-18/96, 14-15=-18/96, 13-14=-18/96, 11-13=-18/96
WEBS	6-17=-98/0, 5-18=-126/95, 4-19=-121/107, 3-20=-118/130, 2-21=-130/175, 7-16=-126/95, 8-15=-120/107, 9-14=-119/124, 10-13=-123/162

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-0-0 to 4-4-13, Exterior(2N) 4-4-13 to 10-0-0, Corner(3R) 10-0-0 to 14-4-13, Exterior(2N) 14-4-13 to 20-8-2 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- All plates are 2x4 (I) MT20 unless otherwise indicated.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 2-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 15 lb uplift at joint 1, 23 lb uplift at joint 11, 60 lb uplift at joint 18, 65 lb uplift at joint 19, 59 lb uplift at joint 20, 81 lb uplift at joint 21, 57 lb uplift at joint 16, 66 lb uplift at joint 15, 60 lb uplift at joint 14 and 72 lb uplift at joint 13.

LOAD CASE(S) Standard



October 9,2025

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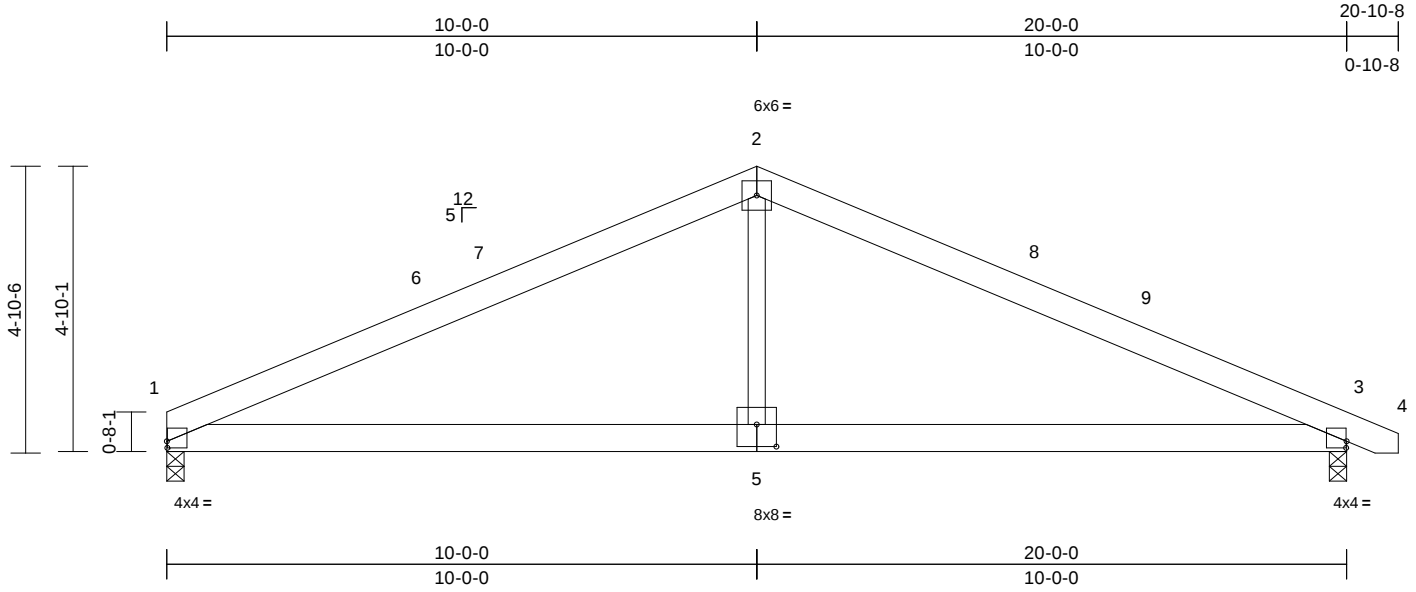
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 46 Harnett Lakes	
251848	B2	COMMON	2	1		I76937397
Job Reference (optional)						

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Oct 2 2025 Print: 25.3.0 S Oct 2 2025 MiTek Industries, Inc. Wed Oct 08 15:58:13
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Page: 1



Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP	
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.53	Vert(LL)	-0.06	1-5	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.38	Vert(CT)	-0.13	1-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.11	Horz(CT)	0.02	3	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S		Wind(LL)	0.04	3-5	>999	240	Weight: 106 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 5-7-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size)

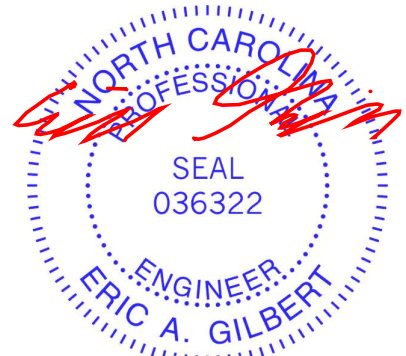
1=0-3-8, 3=0-3-8
Max Horiz 1=-55 (LC 13)
Max Uplift 1=-49 (LC 12), 3=-61 (LC 13)
Max Grav 1=787 (LC 1), 3=839 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1244/368, 2-3=-1246/366, 3-4=0/5
BOT CHORD 1-3=-205/1037
WEBS 2-5=0/480

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 4-6-9, Interior (1) 4-6-9 to 10-0-0, Exterior(2R) 10-0-0 to 14-4-13, Interior (1) 14-4-13 to 20-8-2 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 49 lb uplift at joint 1 and 61 lb uplift at joint 3.



October 9,2025

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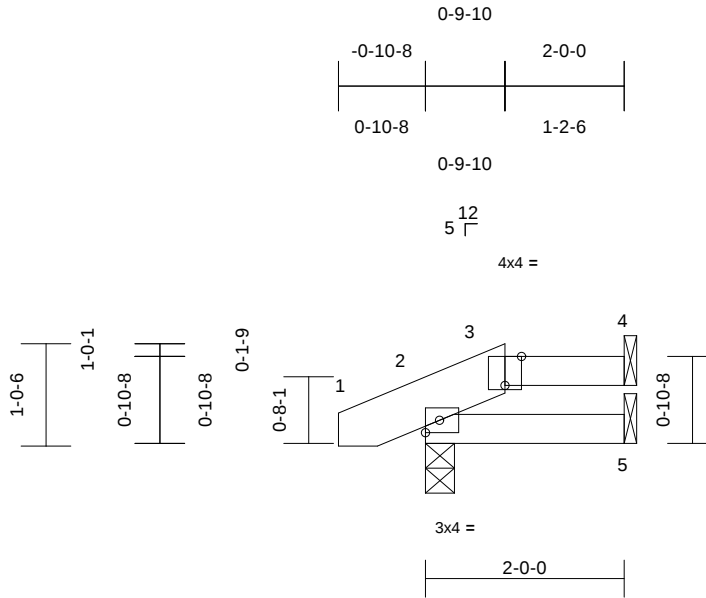
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 46 Harnett Lakes	
251848	J1	HALF HIP	1	1	Job Reference (optional)	I76937398

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Oct 2 2025 Print: 25.3.0 S Oct 2 2025 MiTek Industries, Inc. Wed Oct 08 15:58:13
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Page: 1



Scale = 1:23.2

Plate Offsets (X, Y): [3:0-2-0,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.03	Vert(LL)	0.00	2-5	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.02	Vert(CT)	0.00	2-5	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-P		Wind(LL)	0.00	2-5	>999	240	Weight: 9 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.1 *Except* 3-4:2x4 SP No.1
BOT CHORD 2x4 SP No.1

BRACING

TOP CHORD Structural wood sheathing directly applied or
2-0-0 oc purlins, except
2-0-0 oc purlins: 3-4.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (size) 2=0-3-8, 4= Mechanical, 5=
Mechanical
Max Horiz 2=19 (LC 12)
Max Uplift 2=-24 (LC 8), 4=-16 (LC 9)
Max Grav 2=129 (LC 1), 4=50 (LC 1), 5=34
(LC 3)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 1-2=0/0, 2-3=-40/16, 3-4=0/0
BOT CHORD 2-5=0/0

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Provide adequate drainage to prevent water ponding.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Refer to girder(s) for truss to truss connections.

- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 4 and 24 lb uplift at joint 2.
- Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



October 9,2025

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818 Soundside Road
Edenton, NC 27932

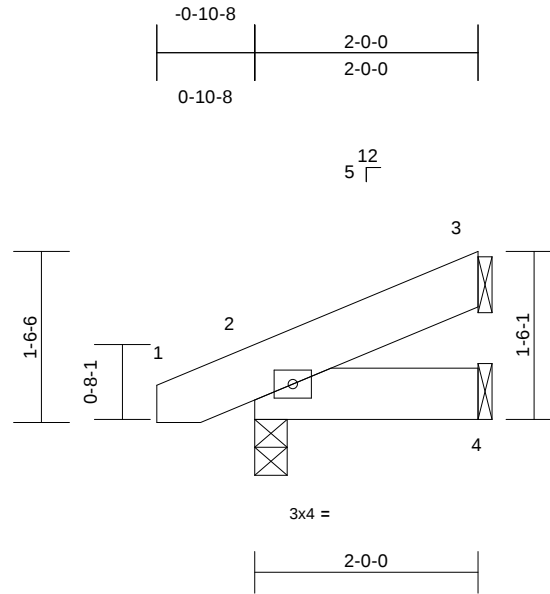
Job	Truss	Truss Type	Qty	Ply	Lot 46 Harnett Lakes
251848	J2	JACK-OPEN	1	1	Job Reference (optional)

I76937399

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Oct 2 2025 Print: 25.3.0 S Oct 2 2025 MiTek Industries, Inc. Wed Oct 08 15:58:13
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Page: 1



Scale = 1:20.6

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.02	Vert(LL)	0.00	2-4	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.01	Vert(CT)	0.00	2-4	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	3	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-P							Weight: 12 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.1

BOT CHORD 2x6 SP No.1

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-0-0 oc purlins.

BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-8, 3= Mechanical, 4= Mechanical
Max Horiz 2=36 (LC 12)
Max Uplift 2=-16 (LC 8), 3=-27 (LC 12)
Max Grav 2=129 (LC 1), 3=51 (LC 1), 4=39 (LC 3)

FORCES (lb) - Maximum Compression/Maximum Tension

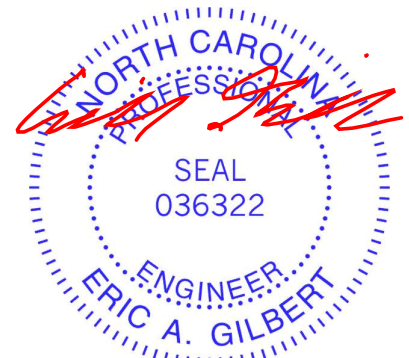
TOP CHORD 1-2=0/5, 2-3=-49/27

BOT CHORD 2-4=0/0

NOTES

- 1) Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 3) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 4) Refer to girder(s) for truss to truss connections.
- 5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 16 lb uplift at joint 2 and 27 lb uplift at joint 3.

LOAD CASE(S) Standard



October 9, 2025

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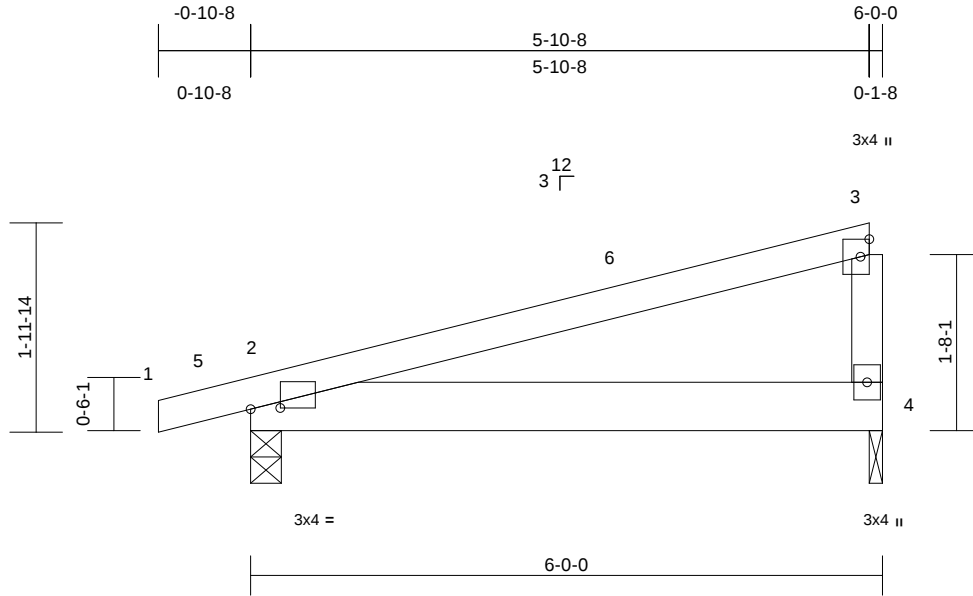
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	Lot 46 Harnett Lakes
251848	J06	Jack-Closed	7	1	Job Reference (optional)
					I76937400

Comtech, Inc, Fayetteville, NC - 28314,

Run: 25.30 S Oct 2 2025 Print: 25.3.0 S Oct 2 2025 MiTek Industries, Inc. Wed Oct 08 15:58:13
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Page: 1



Scale = 1:21.9

Plate Offsets (X, Y): [2:0-3-6,0-0-2]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.49	Vert(LL)	-0.01	2-4	>999	360	MT20	244/190
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(CT)	-0.03	2-4	>999	240		
BCLL	0.0*	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00	4	n/a	n/a		
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-P							Weight: 26 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.1
BOT CHORD 2x6 SP No.1
WEBS 2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or
6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc
bracing.

REACTIONS (size) 2=0-3-8, 4=0-1-8

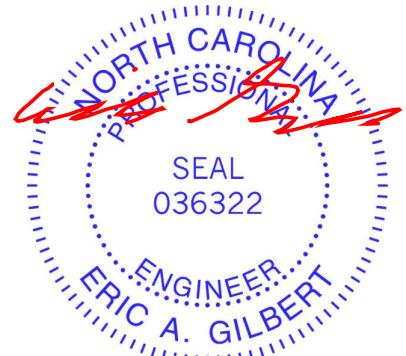
Max Horiz 2=56 (LC 8)
Max Uplift 2=-58 (LC 8), 4=-30 (LC 12)
Max Grav 2=295 (LC 1), 4=222 (LC 1)

FORCES (lb) - Maximum Compression/Maximum
Tension

TOP CHORD 1-2=0/6, 2-3=-81/37, 3-4=-165/250
BOT CHORD 2-4=-2/2

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) -0-10-8 to 3-6-5, Interior (1) 3-6-5 to 5-10-1 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate at joint(s) 4.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 30 lb uplift at joint 4 and 58 lb uplift at joint 2.



October 9,2025

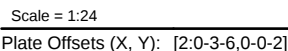
WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcacomponents.com)

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Edenton, NC 27932

Comtech, Inc, Fayetteville, NC - 28314, Run: 25.30 S Oct 2 2025 Print: 25.3.0 S Oct 2 2025 MiTek Industries, Inc. Wed Oct 08 15:58:13 Page: 1
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LUMBER		7) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 5. 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 63 lb uplift at joint 2 and 27 lb uplift at joint 5. 9) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord. 10) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 20 lb down and 30 lb up at 4-0-0 on top chord, and 6 lb down and 0 lb up at 2-0-12, and 8 lb down at 4-0-12 on bottom chord. The design/selection of such connection device(s) is the responsibility of others. 11) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
TOP CHORD	2x4 SP No.1	
BOT CHORD	2x6 SP No.1	
WEBS	2x4 SP No.2	
OTHERS	2x6 SP No.1	
BRACING		
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except 2-0-0 oc purlins: 3-4.	
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.	
REACTIONS	(size)	2=0-3-8, 5=0-1-8
	Max Horiz	2=37 (LC 4)
	Max Uplift	2=-63 (LC 4), 5=-27 (LC 4)
	Max Grav	2=294 (LC 1), 5=220 (LC 1)

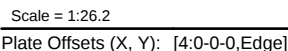
FORCES	(lb) - Maximum Compression/Maximum Tension	LOAD CASE(S)	Standard
TOP CHORD	1-2=0/6, 2-3=-217/7, 3-4=-189/24, 4-5=-84/18	1)	Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
BOT CHORD	2-6=-15/176, 5-6=-22/186		Uniform Loads (lb/ft)
WEBS	3-6=-76/57		Vert: 1-3=-60, 3-4=-60, 2-5=-20
NOTES			Concentrated Loads (lb)
1)	Unbalanced roof live loads have been considered for		Vert: 7=-3 (B)

- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope); Lumber DOL=1.60 plate grip DOL=1.60
- 3) Provide adequate drainage to prevent water ponding.
- 4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 5) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3'-06"-00 tall by 2'-00"-00 wide will fit between the bottom chord and any other members.
- 6) Bearing at joint(s) 5 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.



October 9.2025

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LUMBER

TOP CHORD	2x4 SP No.1
BOT CHORD	2x4 SP No.1
OTHERS	2x4 SP No.2

BRACING	
TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS	(size)	
		1=12-5-2, 5=12-5-2, 6=12-5-2, 7=12-5-2, 8=12-5-2
Max Horiz		1=-46 (LC 13)
Max Uplift		1=-19 (LC 12), 5=-27 (LC 13), 6=-111 (LC 13), 8=-112 (LC 12)
Max Grav		1=113 (LC 1), 5=113 (LC 1), 6=290 (LC 1), 7=68 (LC 22), 8=289 (LC 1)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-48/55, 2-3=-48/105, 3-4=-48/100,
4-5=-32/42

BOT CHORD 1-8=-13/49, 7-8=-13/49, 6-7=-13/49,
5-6=-13/49

WEBS 3-7=-54/0. 2-8=-208/238. 4-6=-208/238

NOTES

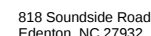
- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDF=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-9-6 to 5-2-3, Interior (1) 5-2-3 to 6-2-9, Exterior(2R) 6-2-9 to 10-7-6, Interior (1) 10-7-6 to 11-7-12 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1

- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 2-0-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 7) * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 19 lb uplift at joint 1, 27 lb uplift at joint 5, 112 lb uplift at joint 8 and 111 lb uplift at joint 6.

LOAD CASE(S) Standard



Design valid for use only with MiTeK® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Components Association (www.sbcacomponents.com)

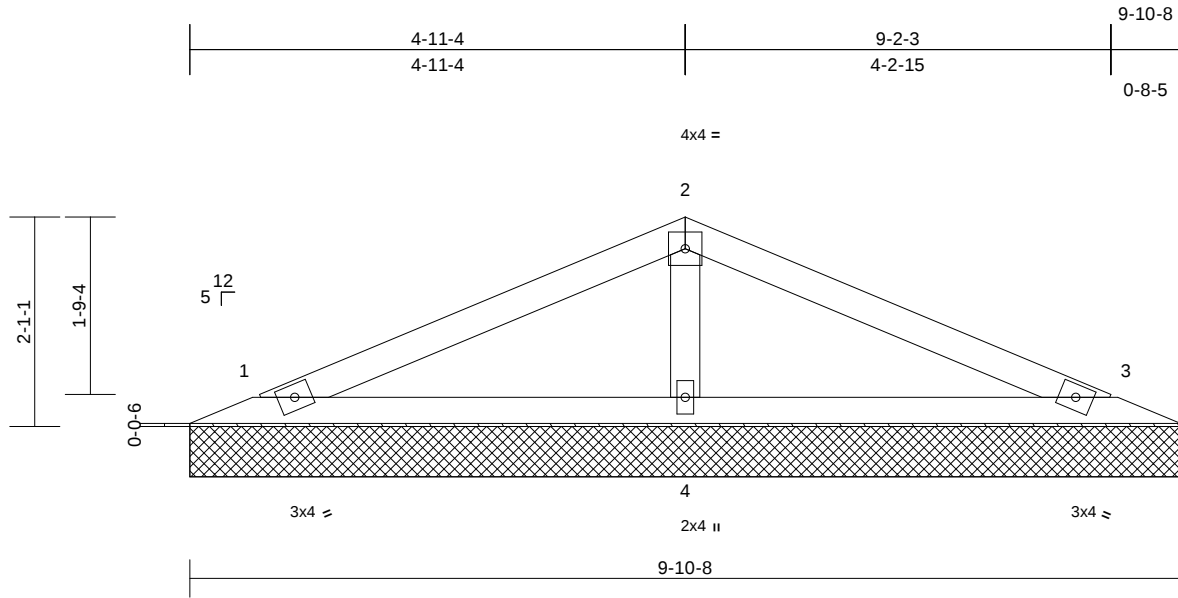


Job	Truss	Truss Type	Qty	Ply	Lot 46 Harnett Lakes	
251848	V2	VALLEY	1	1	Job Reference (optional)	I76937403

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Page: 1



Scale = 1:23

Loading	(psf)	Spacing	2-0-0	CSI	DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.18	Vert(LL)	n/a	-	n/a	999	MT20
TCDL	10.0	Lumber DOL	1.15	BC	0.13	Vert(TL)	n/a	-	n/a	999	244/190
BCLL	0.0*	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	n/a	n/a	
BCDL	10.0	Code	IRC2021/TPI2014	Matrix-S							Weight: 31 lb FT = 20%

LUMBER

TOP CHORD 2x4 SP No.1
BOT CHORD 2x4 SP No.1
OTHERS 2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS

(size) 1=9-10-8, 3=9-10-8, 4=9-10-8
Max Horiz 1=21 (LC 12)
Max Uplift 1=-20 (LC 12), 3=-24 (LC 13), 4=-2 (LC 12)
Max Grav 1=153 (LC 25), 3=153 (LC 26), 4=378 (LC 1)

FORCES

(lb) - Maximum Compression/Maximum Tension

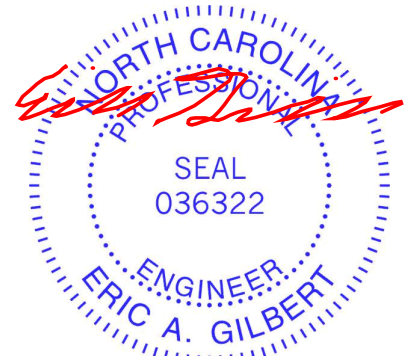
TOP CHORD 1-2=-72/57, 2-3=-72/63
BOT CHORD 1-4=0/27, 3-4=0/27
WEBS 2-4=-254/237

NOTES

- Unbalanced roof live loads have been considered for this design.
- Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- Gable requires continuous bottom chord bearing.
- Gable studs spaced at 0-0-0 oc.
- This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

- * This truss has been designed for a live load of 30.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
- Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 20 lb uplift at joint 1, 24 lb uplift at joint 3 and 2 lb uplift at joint 4.

LOAD CASE(S) Standard



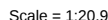
October 9,2025

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.

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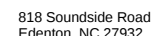
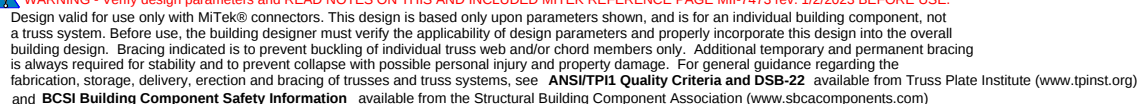
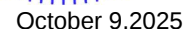
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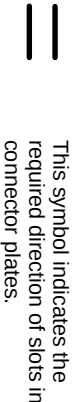
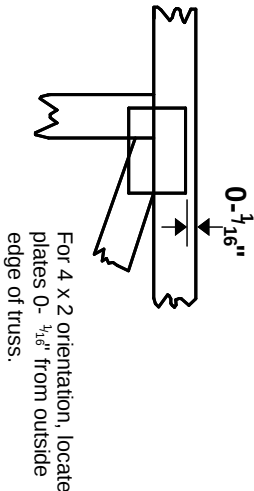
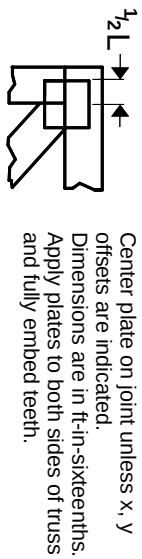
- 1) Unbalanced roof live loads have been considered for this design.
- 2) Wind: ASCE 7-16; Vult=130mph (3-second gust)
Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=15ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) and C-C Exterior(2E) zone; C/C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
- 4) Gable requires continuous bottom chord bearing.
- 5) Gable studs spaced at 0-0-0 oc.
- 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

LOAD CASE(S) Standard



Symbols

PLATE LOCATION AND ORIENTATION



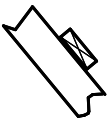
* Plate location details available in MITek software or upon request.

PLATE SIZE

4 X 4

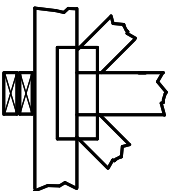
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

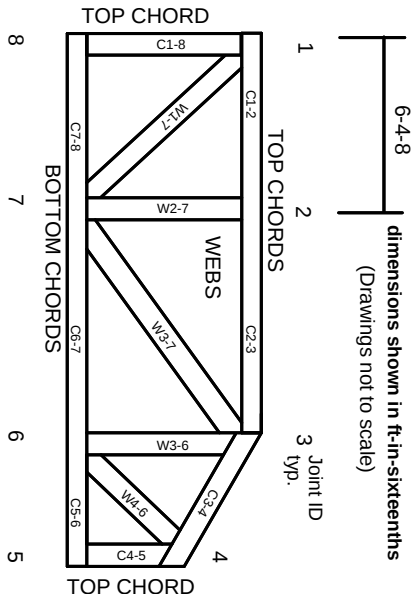
BEARING



Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:
ANSI/TP1.1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

Product Code Approvals

ICC-ES Reports:
ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.
Lumber design values are in accordance with ANSI/TP1 1 section 6.3. These truss designs rely on lumber values established by others.

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General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TP1 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.

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MITek Engineering Reference Sheet: MIL-7473 rev. 1/2/2023